



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,957	10/16/2001	Brian James Misek	10010215-1	7262

7590 03/22/2004
AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

LUU, THANH X

ART UNIT PAPER NUMBER

2878

DATE MAILED: 03/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,957

Applicant(s)

MISEK, BRIAN JAMES

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-18 and 21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 3-18 and 21 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to amendments and remarks filed January 2, 2004. Claims 3-18 and 21 are currently pending.

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 19 has been renumbered 21.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the system implemented in a scanner application, an optical mouse application, a video game controller application, a movement encoder application, a near field application and a far field application must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3-9 are dependent from cancelled claim 19. For examination purposes, it is believed that Applicant intended for claims 3-9 to be dependent from renumbered claim 21.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 3-5, 8-14, 17, 18 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Krymski (U.S. Patent 6,222,175).

Regarding claims 3-5, 8-13 and 21, Krymski discloses (see Figures 3 and 4) a system, comprising: an array of photocells (50) that are arranged in rows and columns; and a sequential readout circuit (at 42) for sequentially reading out the value of the photocells one photocell at a time (see column 4, lines 25-30); wherein the readout circuit comprises a single amplifier (67) that includes an input for coupling to one column of the array of photocells at a time and an output for generating a voltage value

corresponding to a photocell. Krymski further discloses (see Figures 3 and 4) determining a difference between a final integration light value and a reset value for each photocell in a time sequential manner. Krymski also discloses (see column 4, lines 25-30) a sample and hold circuit that holds a voltage value of a photocell for each column, the sample and hold circuit includes a single sampling capacitor and a single transistor as claimed. In addition, Krymski discloses (see Figure 4) the photodiode circuit (50) as claimed. Krymski also discloses (see column 1, lines 10-15) the system implemented in a far field application. Krymski further discloses (see Figure 4) an amplifier (67) that includes a first input (-); an output; and an integration capacitor (C3) having a first electrode for coupling to the first input and a second electrode for coupling to the output of the amplifier; the amplifier includes a charge transfer mode and a unity gain mode (when M11 is on).

Regarding claims 10-14, 17 and 18, Krymski discloses (see Figures 3 and 4) a sequential readout circuit for coupling an array of photocells, wherein the array includes at least a first row, a first column, a second column, a first photocell disposed in the first row and the first column, and a second photocell disposed in the first row and second column, comprising: a single amplifier (67) for reading out a value of the photocells one at a time; a first switch (first instance of M9 or M10 in a first instance of 52; see Figure 3 showing multiple instances of 52) for selectively coupling the amplifier to the first column; and a second switch (a second instance of M9 or M10 in a second instance of 52) for selectively coupling the amplifier to the second column. Krymski further discloses (see Figure 4) the amplifier determines the difference between a reset voltage

and a light voltage for the first and second photocell in a time sequential manner.

Krymski also discloses (see column 4, lines 25-30) a sample and hold circuit that holds a voltage value of a photocell for each column and the sample and hold circuit includes a capacitor (C1) and a transistor (M4 or M7) coupled to the capacitor. In addition,

Krymski discloses (see Figure 4) the photodiode circuit (50) as claimed. Krymski also discloses (see column 1, lines 10-15) the system implemented in a far field application.

Krymski further discloses (see Figure 4) an amplifier (67) that includes a first input (-); an output; and an integration capacitor (C3) having a first electrode for coupling to the first input and a second electrode for coupling to the output of the amplifier; the amplifier includes a charge transfer mode and a unity gain mode (when M11 is on).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 7, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krymski in view of Simerly et al. (U.S. Patent 5,982,424).

Regarding claims 6, 7, 15 and 16, Krymski discloses the claimed invention as set forth above. Krymski does not specifically disclose a level shifting or gain manipulation circuit as claimed. Simerly et al. teach (see column 7, lines 35-47) level shifting and gain manipulating in a similar system. Simerly et al. further recognize that level shifting and gain manipulation accounts for variations in dynamic ranges among frames. Thus,

it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide such circuits in the apparatus of Krymski in view of Simerly et al. to improve detection as taught.

Response to Arguments

9. Applicant's arguments filed January 2, 2004 have been fully considered but they are not persuasive.

First, Applicant asserts that the prior art does not disclose a single amplifier. Examiner disagrees. Figure 4 of the Krymski reference clearly shows a single amplifier (67). Applicant is reminded that "comprising" language is open-ended. Similarly, Applicant's assertion that the prior art does not disclose a single capacitor or a single transistor is not persuasive.

Second, Applicant asserts that the prior art does not look like Figure 2 of the current invention. Examiner agrees. However, patentability hinges on the claims not the figures. Thus, Applicant's assertion with regard to the figures is irrelevant.

Third, Applicant asserts that the switches of the prior art act only to connect to one column. Examiner disagrees. Applicant has misunderstood Examiner's position. Examiner has clarified that as shown in Figure 3 of Krymski there are multiple circuits of 52 connected to a single circuit of 54. As set forth above, each instance of M9 in each circuit of 52 acts as a first and second switch to connect the amplifier to a respective column, as claimed.

10. Applicant's arguments with respect to claims 6, 7, 15 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

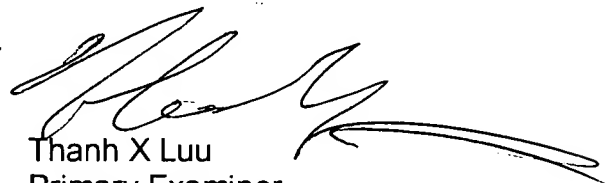
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2878

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X Luu
Primary Examiner
Art Unit 2878